

REMARKS

Claims 1-7 and 9-15 are presented for examination. Favorable reconsideration and further examination are respectfully requested.

Rejections under 35 U.S.C. § 112

Claims 1-7 and 9-15 were rejected under 35 U.S.C. § 112, first paragraph as allegedly failing to comply with the written description requirement.

Regarding claims 1, 14, and 15 the Office maintains that the feature of “chemically etching at least portion [*sic*] pf the base body, the first electrode, and the second electrode with etching solution to adjust a resistance” is new matter.¹ Without conceding the appropriateness of the rejections, we have removed the allegedly unsupported features from claims 1, 14, and 15. Accordingly, the rejection of claims 1-7 and 9-15 under 35 U.S.C. § 112, first paragraph should be withdrawn.

Rejections under 35 U.S.C. § 103

Claims 1-7 and 9-15 were rejected as being allegedly unpatentable over U.S. Publication No. 2002/0089065 (Fujimoto) in view of U.S. Publication No. 2002/0011919 (Ito), U.S. Patent No. 6,475,604 (Fujii), or U.S. Patent No. 6,172,592 (Inoue).

Independent claim 1 is shown below.

1. A method comprising:
forming a first electrode and a second electrode on a base body; and

¹ Office Action dated May 22, 2009, page 2.

chemically etching at least a portion of the base body with an etching solution to adjust a resistance of the base body between the first electrode and the second electrode; wherein the first and second electrodes are made from a material that is etchable, by the etching solution, substantially less than the base body is etchable by the etching solution.

The applied art is not understood to describe or to suggest at least the underlined features of claim 1 above.

More specifically, Fujimoto is understood to disclose a process of dipping a thermistor body in a solution in order to partially melt away its externally exposed surfaces and to thereby increase the resistance between the outer electrodes.”² Fujimoto is understood to describe an etching process in which both outer electrodes of a chip are dipped in a resist material and dried. The outer electrodes are then covered by a resist layer and placed in a basket with a solvent. The parts of the chip which are not covered by a resist layer are melted away, and the resist layers are then removed.³

Fujimoto is also understood to describe an etching process in which the thermistor body is dipped in a solvent without first forming any resist layer thereon, and in which “the solvent 10 [is] of a kind such as a plating liquid which melts the thermistor body 32 but not the outer electrodes.”⁴ These features of Fujimoto are not understood to describe or to suggest the features of claim 1 above.

On page 4 of the office action, the Office concedes that Fujimoto does not disclose that the first and second electrodes are made from a material that is etchable, by the etching solution, substantially less than the base body is etchable by the etching solution.⁵ We agree. However,

² Fujimoto, paragraph 0005.

³ Id., paragraph 0030.

⁴ See, e.g., id. at paragraph 0038.

⁵ Office Action dated May 22, 2009, page 4.

the Office also alleges that it would have been obvious to one of ordinary skill in the art to use the materials disclosed in Ito, Fujii, or Inoue for the electrodes of the thermistor in Fujimoto. We respectfully disagree with this contention.

According to German counsel, Fujimoto discloses that the electrodes are covered either by a resin, or by use of a plating liquid. By using a plating liquid, the plating liquid covers the electrodes by precipitation of metal from the plating liquid. Furthermore, the plating liquids precipitate a more noble metal onto the ignoble electrodes. Thus, the electrodes are covered by a metal that is at least more noble than the metal of the electrodes, which protects the electrodes from being etched by the plating liquid. Thus, Fujimoto discloses that the electrodes can be sufficiently protected from being etched by either a cover of a resin or by a "noble" metal cover using a plating liquid.

In view of the above-described features of Fujimoto, it would not have been obvious to make the electrodes from a material that is etchable, by the etching solution, substantially less than the base body is etchable by the etching solution. Because the electrodes of Fujimoto are not etched by the etching solution (because they are covered by either a resin or by a metal cover of the plating liquid), the use of the electrodes being made from a material that is etchable, by the etching solution, substantially less than the base body is etchable by the etching solution would be unnecessary and redundant.

In contrast to the features of claim 1, the techniques disclosed Fujimoto require that the electrodes are protected during etching. This is not merely a trivial distinction; rather, the features of claim 1 explicitly allow that the ceramic body, as well as the electrodes, are attacked

by the etching solvent. This technique is advantageous in that contaminations on the surface of the outer electrodes will be etched away during the etching process. Exposing the outer electrodes during the etching process may also be beneficial for the soldering of the final chip, as the surface of the electrodes will have been scored by the etching solution. Accordingly, claim 1 is believed to be patentable over any reasonable combination of Fujimoto, Ito, Fujii, or Inoue.

Independent claims 14 and 15 contain features that are similar to those recited in claim 1, and are believed to be patentable for at least the same reasons described above with regard to claim 1.

Each of the dependent claims is believed to define patentable features of the invention. Each dependent claim partakes of the novelty of its corresponding independent claim, in light of the foregoing amendments, and, as such, has not been discussed specifically herein.

CONCLUSION

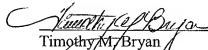
It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

In view of the foregoing amendments and remarks, Applicant respectfully submits that the application is in condition for allowance, and such action is respectfully requested at the Examiner's earliest convenience.

Please charge any additional fees, not already covered by check, or credit any overpayment, to deposit account 06-1050, referencing Attorney Docket No. 14219-093US1.

Respectfully submitted,

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